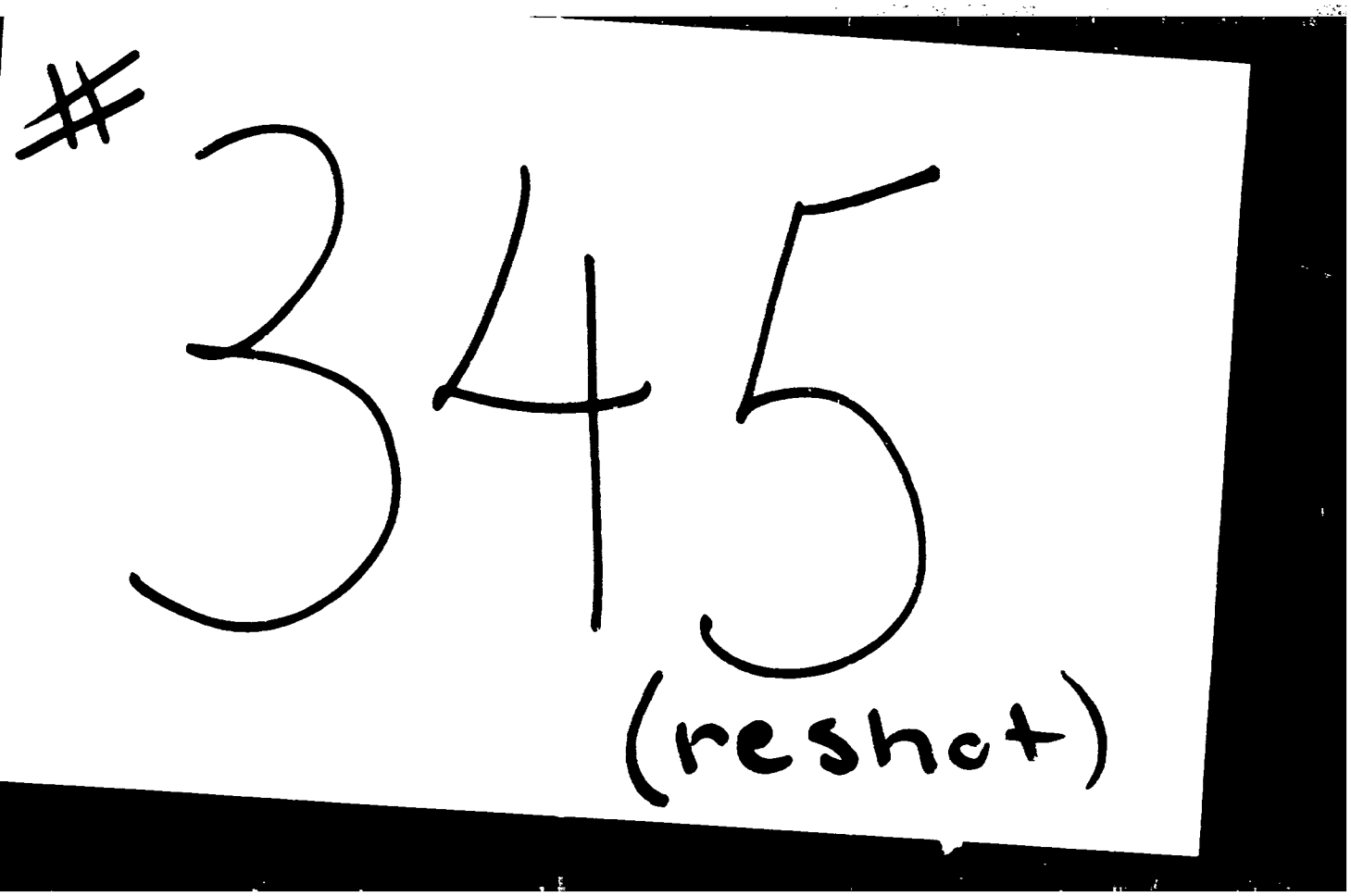


ACC NR: AP6030451 SOURCE CODE: UR/0065/66/006/004/0603/0607

AUTHOR: Karpukhina, ... Mayzus, ... atiyenko, ...

ORG: Institute of Chemical Physics, AN SSSR (Institut khimicheskoy fiziki AN SSSR)

TITLE: Interaction of phenol and aromatic-amine inhibitors in hydrocarbon-oxidation reactions

SOURCE: Neftekhimiya, v. 6, no. 4, 1966, 603-607

TOPIC TAGS: oxidation inhibition, antioxidant additive, combustion modifier, synergism, ALKYLPHENOL, FREE RADICAL STABILIZATION

ABSTRACT: A relationship has been established between the occurrence of synergism between two oxidation inhibitors—an aromatic amine (AmH) and an alkylphenol (PhOH)—and the structure of the alkylphenol. This synergism is assumed to be due to a free-radical reaction of the two inhibitors:

$$AmH + RO_2^{\cdot} \rightarrow Am^{\cdot} + RO_2H \quad (1)$$

$$Am^{\cdot} + PhOH \rightleftarrows AmH + PhO^{\cdot}. \quad (2)$$

Card 1/2 UDC: 547.21:542.978:[547.56+547.551

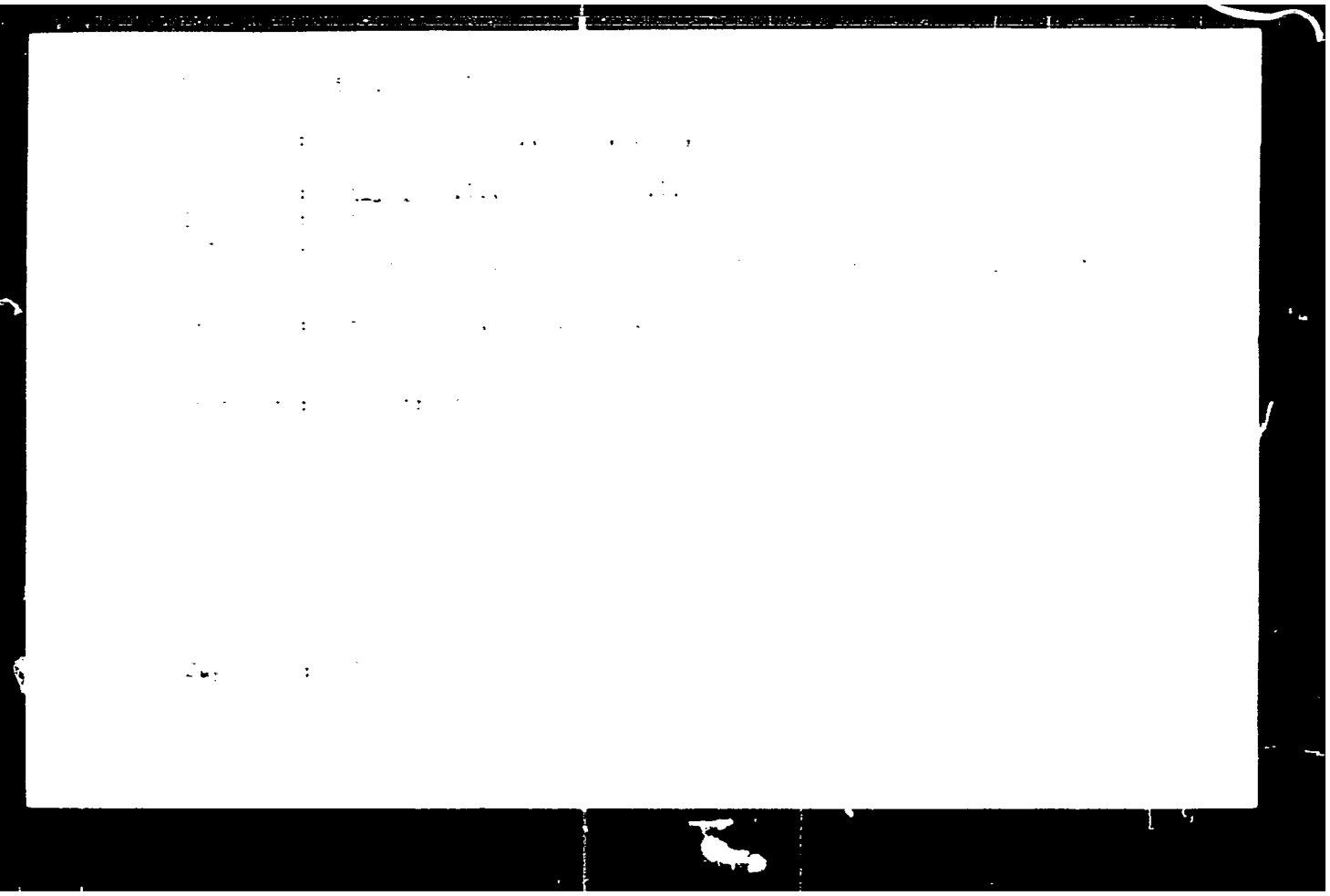
L 43750-66
ACC NR: AP6030451

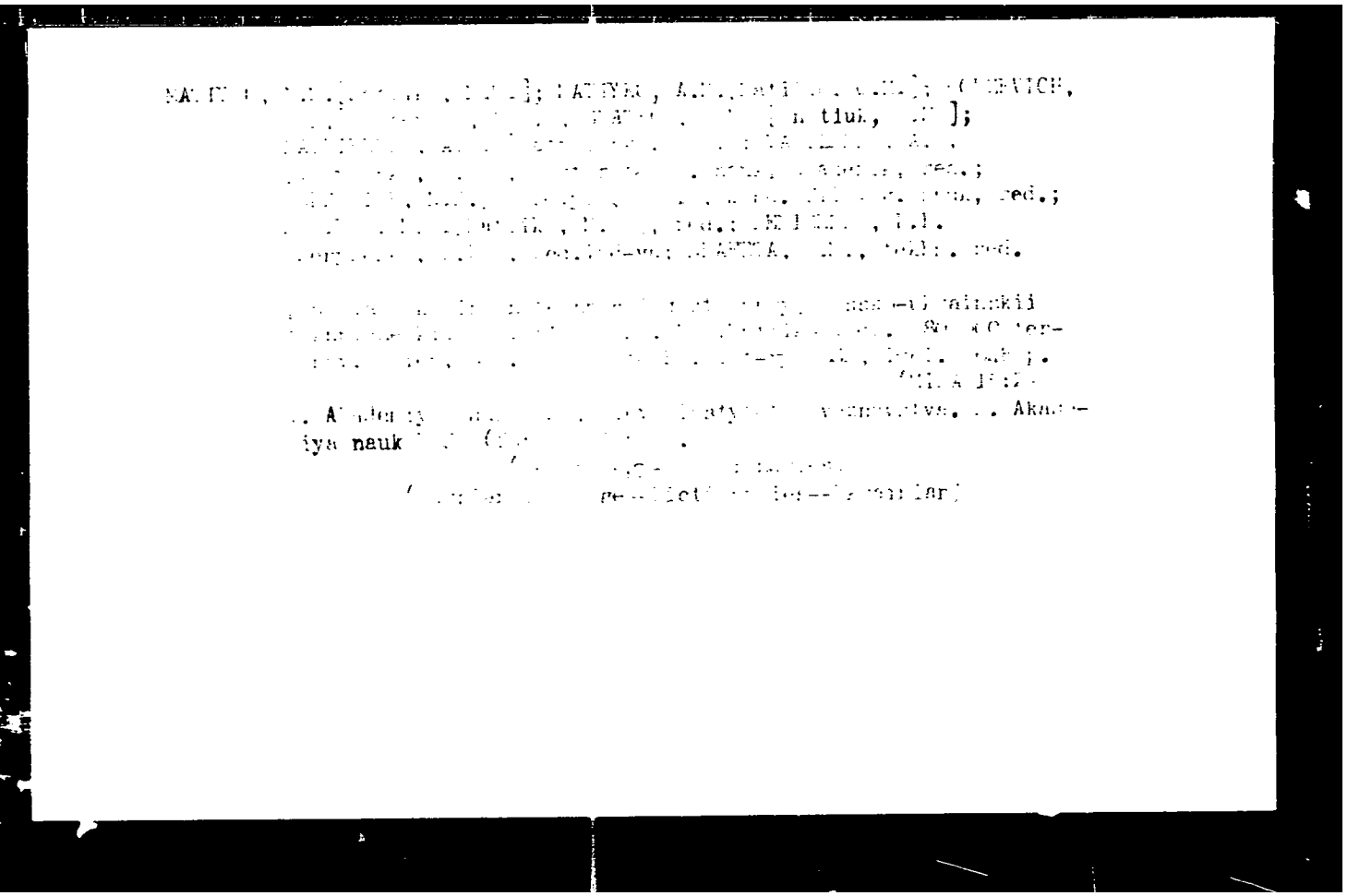
6

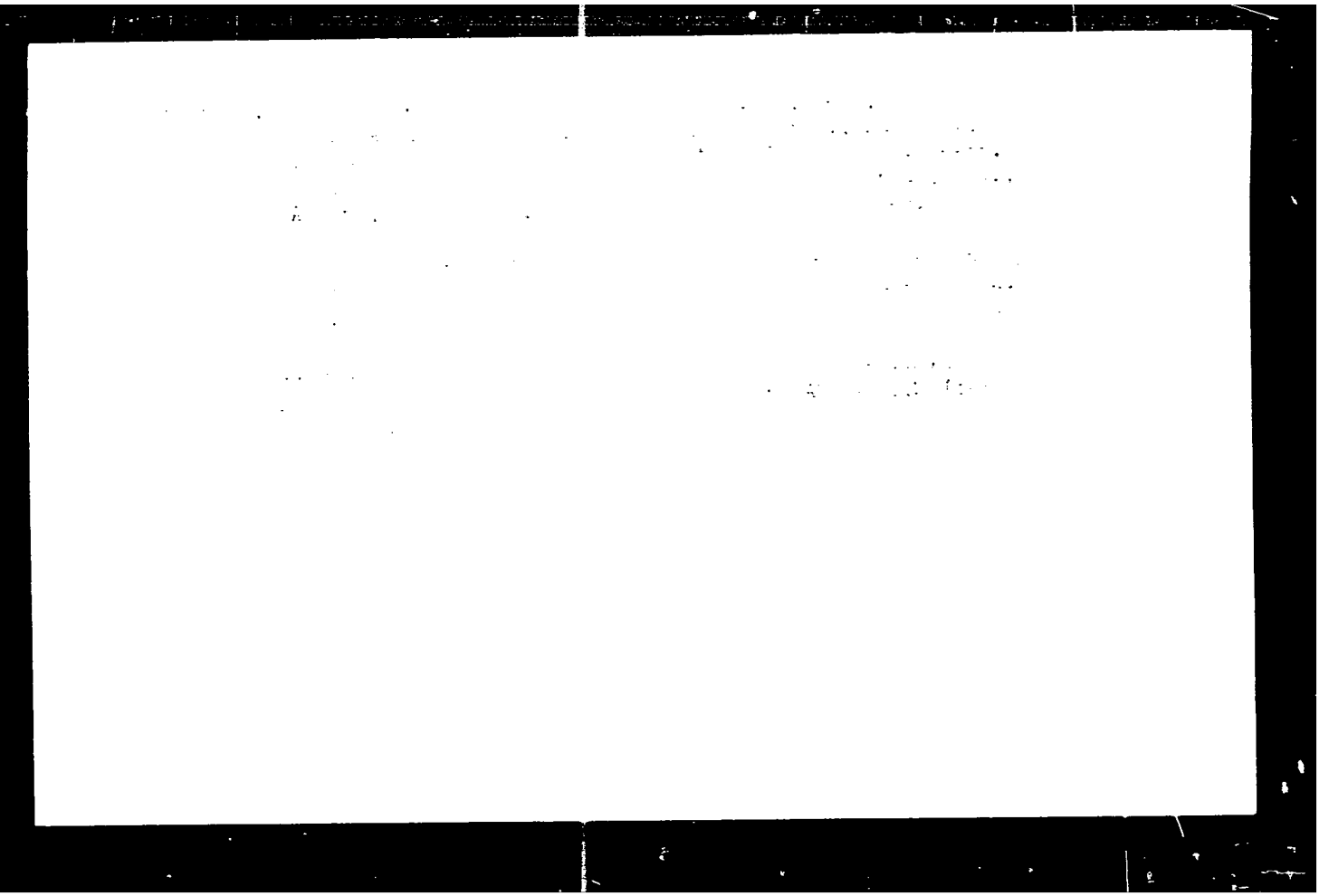
The effect of phenols having different substituents ortho or para to the OH group, in conjunction with N-phenyl-β-naphthylamine (Neozone D) was studied in the azobisisobutyronitrile-initiated low-temperature (60—70C) oxidation of ethylbenzene, by a chemiluminescence technique and by chemical analysis. It was shown that the synergism occurs in the case of o,o'-dialkylphenols but not in the case of o-alkyl and nonsubstituted phenols. This was attributed to the fact that the rate of amine regeneration (reaction (2)) increases with increasing PhO· radical stability, which in turn increases with increasing steric hindrance of the phenol's OH group. A relationship was also established between the inhibitor effectiveness of the phenols [in the absence of the amine] and their structure. The criterion of inhibitor effectiveness used was the constant of the reaction of the phenol with RO$_2$· radicals. The activation energy of the reaction of 2,4,6-tri-tert-butylphenol with RO$_2$· radicals was found to be 3.4 kcal/mol. The authors thank N. M. Emanuel', A. A. Berlin, and V. V. Yershov for discussing this study. Orig. art. has: 4 figures. [SM]

SUB CODE: 07, 11, 21/ SUBM DATE: 02Jul65 ORIG REF: 005/ OTH REF: 003
ATD PRESS: 5076

Card 2/2







MATIYKO, M.M.; KORENKOV, O.I.

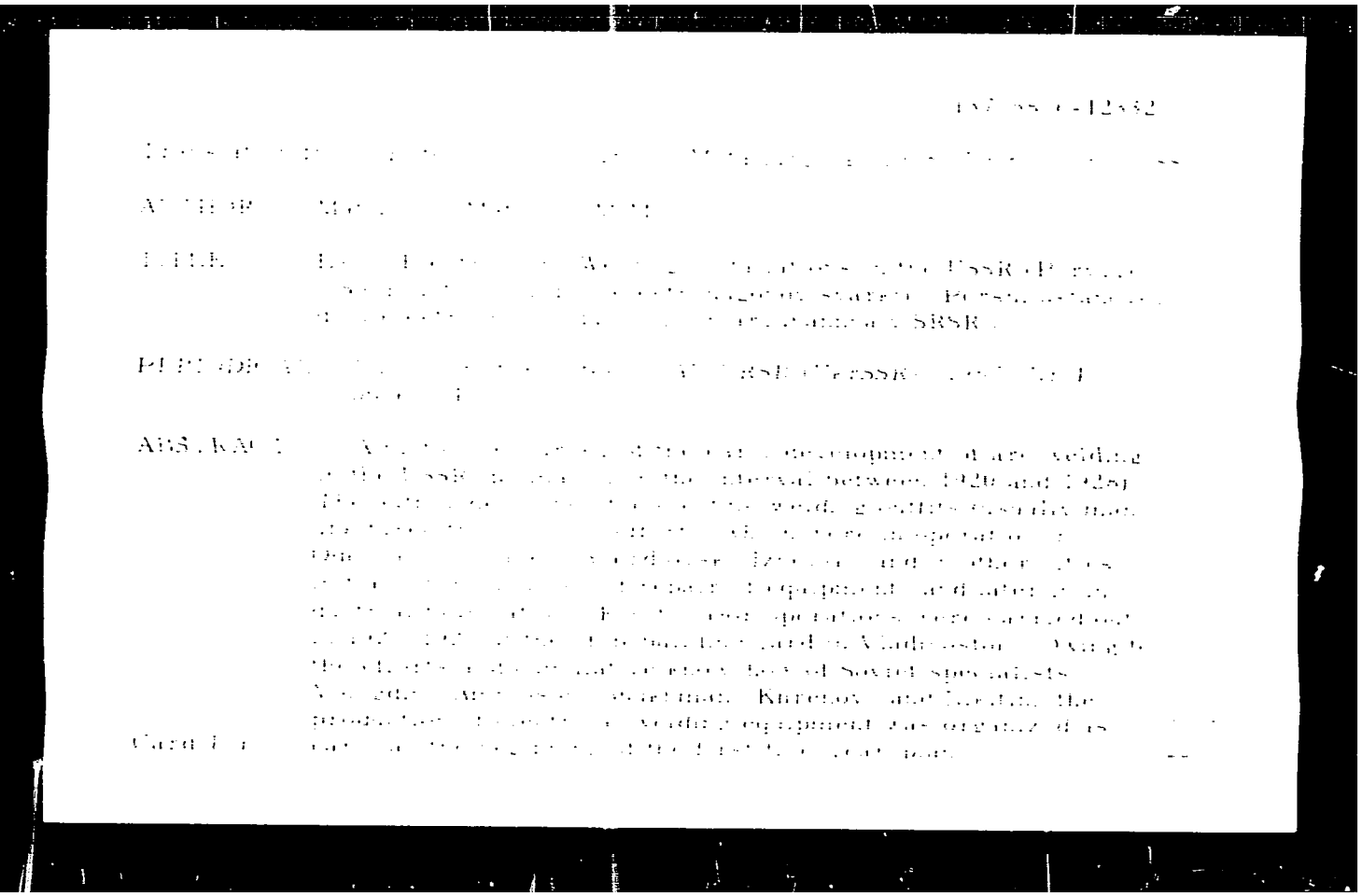
Development of high-speed electric welding at Donets Basin industrial enterprises. Nar. z ist.tekh. no.1:80-98 '54. (Donets Basin--Electric welding) (MLRA 9:4)

MATIYKO, M.M.

E.O.Paton and the development of electric welding. Nar. z ist.tekn. no.2:34-61 '55. (MLRA 9:4)
(Paton, Evgenii Oskarovich, 1870-1953) (Electric welding)

MATIYKO, M.M.; KORYKNNOY, O.I.

History of Russian bridge construction based on electric welding.
Nar. z tet. tekh. no.3:103-122 '56. (MLRA 10.4)
(Bridge construction) (Electric welding)



GAVRILOV, V.D. [Havrylov, V.D.]; [illegible], M.M.; KH[illegible], L.S. [Khyl[illegible]bochenko, L.S.]

First rural hydroelectric power plant [illegible].
Nar.z ist.tekh. no.5:112-144 '59. ([illegible])
(Ukraine--Hydroelectric power stations)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R032932910001-1"

KORENNOY, A.[Koriennoi, O.]; MATIYKO, N.[Matiiko, M.]; SOLODKIY, V.V.[Solodkyi, V.V.], red.; GURVICH, O.G.[Hurvych, O.H.], tekhn. red.

[Technological progress in electrical welding] Elektrozvariuvannia i progres tekhniky. Kyiv, Kyivs'ke oblasne knyzhkovogazetne vyd-vo, 1960. 37 p. (MIRA 15:7)
(Electric welding)

MATIYKO, Nikolay Mikhaylovich [Matiyko, M.M.]; PATON, B.Ye. [Paton, B.IE.], akad., otv.red.; HEMENNIK, T.K., red.izd-va; KRYLOVSKAYA, N.S. [Krylovs'ka, N.S.], tekhn. red.

[Development of electric arc welding in the Ukraine] Rozvytok duhovoho elektrozvariuvannia na Ukraini. Kyiv, Vyd-vo Akad. nauk URSR, 1960. 154 p. (MIRA 13:6)

1. AN USSR (for Paton).
(Ukraine--Electric welding)

PHASE I BOOK EXPLOITATION SOV/4[illegible]6

Matlyko, Nikolay Mikhaylovich, and Lev Davydovich Radunskiy

Razvitiye dugovoy elektrosvarki v SSSR (1917-1960 gg.) (Development of Electric Arc Welding in the USSR, 1917-1960) Moscow, Gosenergoizdat, 1960. 301 p. Errata slip inserted. 3,500 copies printed.

Ed. (Title page): K.K. Khrenov, Corresponding Member, Academy of Sciences USSR, Academician, Academy of Sciences Ukrainskaya SSR; Ed. (Inside book): A.L. Saparova; Tech. Ed.: G.Ye. Larionov.

PURPOSE: This book is intended for technical personnel, students of schools of higher education and tekhnikums, and general readers interested in technical developments in the Soviet Union.

COVERAGE: The book contains discussions on scientific research work in the field of welding, improvements in welding techniques, the development of adequate facilities, and the training of qualified welders. Attention is given to the achievements of various branches of Soviet industry in introducing advanced welding methods. The development of electric arc welding in non-Soviet countries is also briefly discussed. The authors thank Academician B.Ye. Paton, Academy of Sciences Ukrainskaya SSR; Yu.A. Anisimov, N.A. Ol'shanskiy.

Card 1/4

V.V. Shevernitskiy, G.V. Rayevskiy, and P.G. Grebel'nik, Candidates of Technical Sciences; and Engineer A.I. Korennoy for their valuable comments. The authors also thank K.K. Khrenov, Corresponding Member of the Academy of Sciences USSR, Academician, Academy of Sciences Kazakhskaya SSR, for editing the book and supplementing a number of its chapters. There are 420 references, all Soviet.

TABLE OF CONTENTS:

MATIYKO, Nikolay Mikhaylovich [Matiiko, M.M.]; BORODKHOTOV, M.M., akademik, otv. red. [deceased]; ORLIK, O.L.[Orlyk, O.L.], red.; REKES, M.A., tekhn. red.

[Konstantin Konstantinovich Khrenov] Kostiantyn Kostiantynovych Khrenov. Kyiv, Vyd-vo AN Ukr.RSR, 1963. 67 p. (MIRA 17:3)

GNYP, Pavel Ivanovich [Hnyp, P.I.]; DOBROKHOTOV, M.M., akademik, retsenzent; STASIV, M.Yu., kand.ekon. nauk, retsenzent; MATIYKO, M.M., red.; RAKHLINA, N.P., tekhn. red.

[Development of gasification in the Ukraine] Rozvytok gazyfikatsii Ukrainy; istoryko-tekhnichnyi narys. Kyiv, Vyd-vo AN URSR, 1963. 178 p. (MIRA 16:9)

1. AN Ukr.SSR (for Dobrokhotov).
(Ukraine--Gas industry)

AMIRKHANOV, Kh.I.; GURVICH, I.G [redacted], B.V.

Concerning the paper by V.P.Skripov and V.K.Semenchenko "Second order phase transitions and critical phenomena. Part 5. The heat capacity maximum in the critical region of separation of binary liquid systems." Zhur.fiz.khim.30 no.5:1158-1161 My '56. (MLRA 9:9)

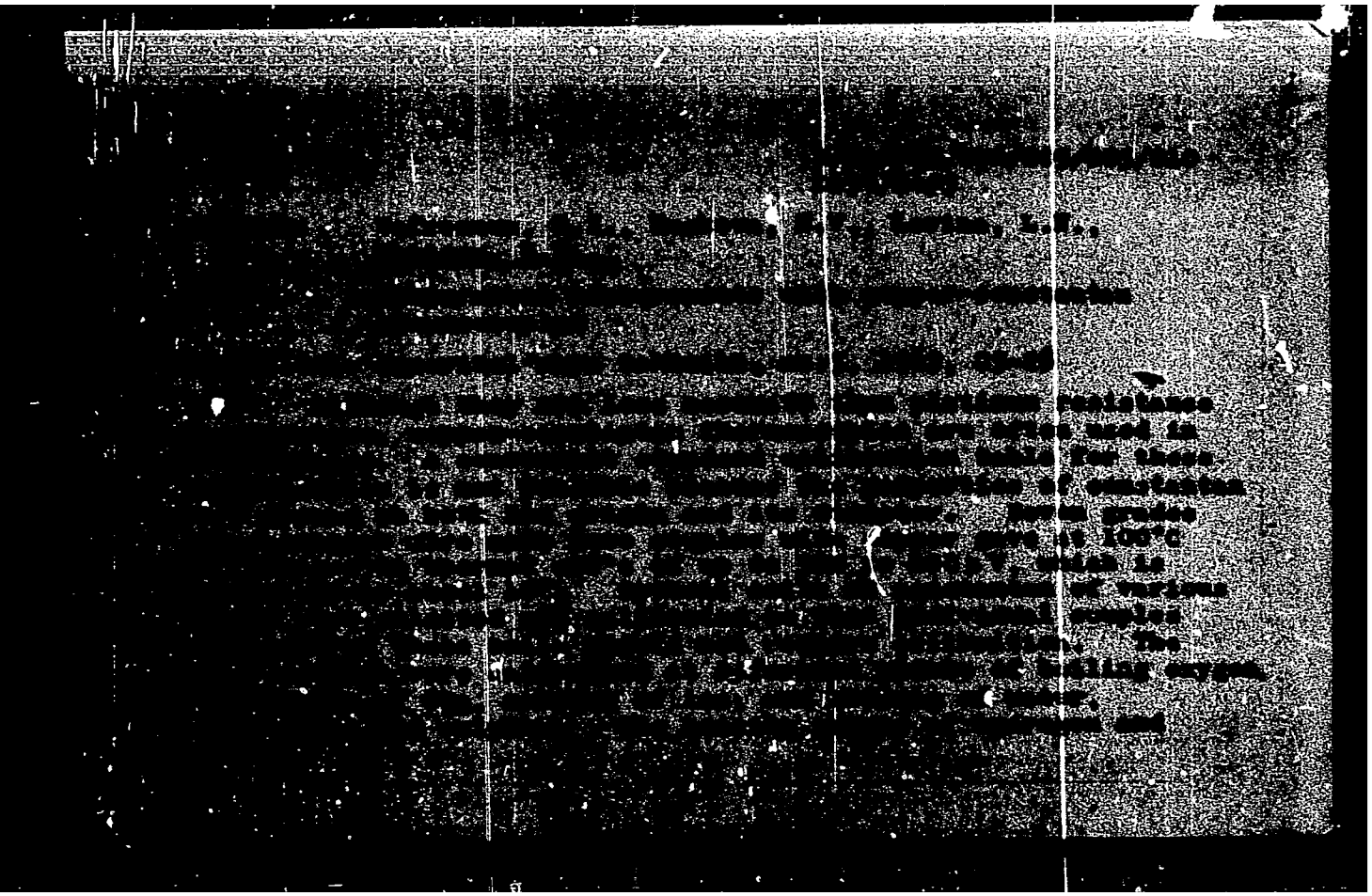
1.Dagestanskiy filial Akademii nauk SSSR, Makhachkala.
(Phase rule and equilibrium) (Specific heat)

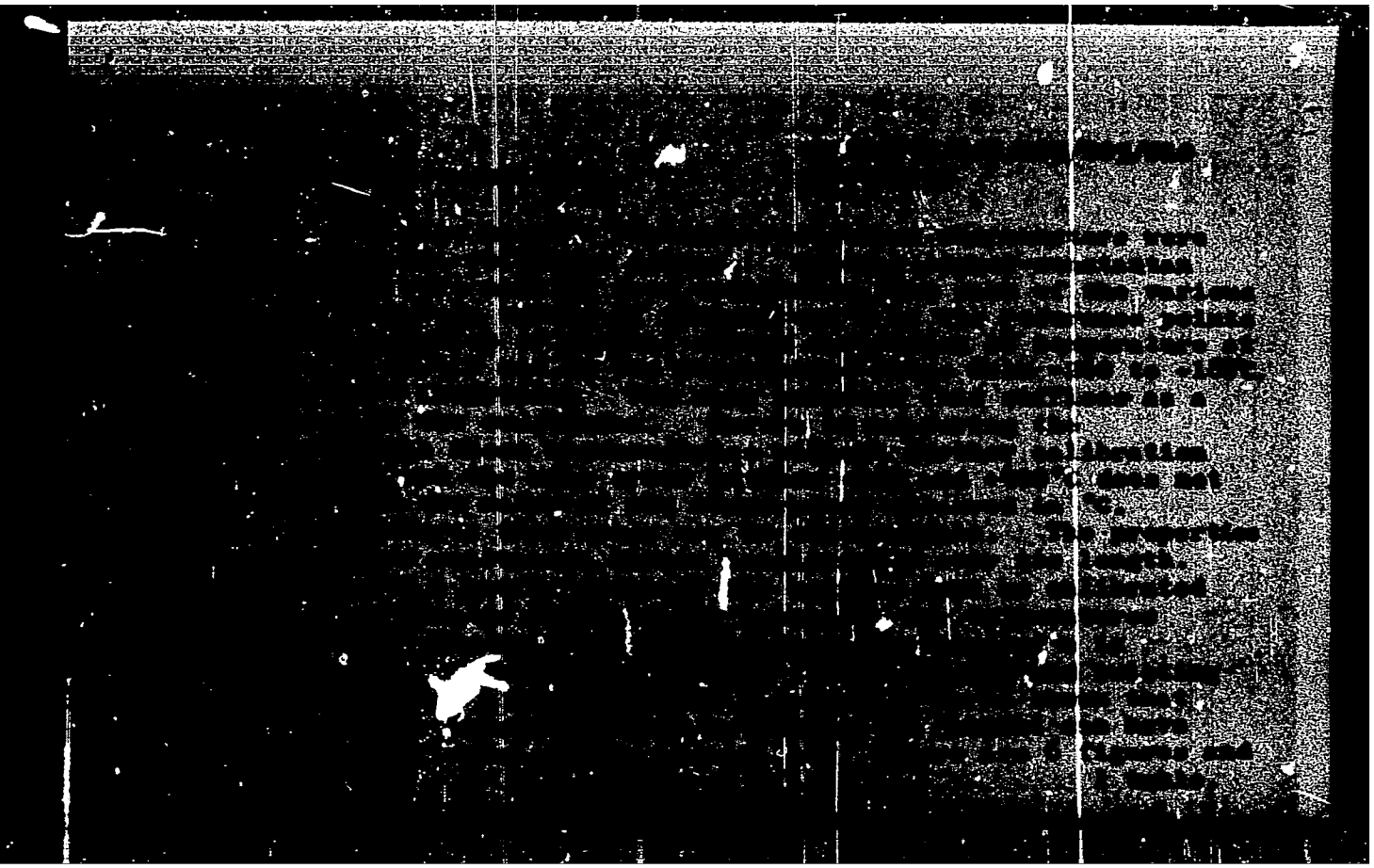
MATIZEN, E. V.: Master Phys-Math Sci (diss) -- "Thermal content and heat of mixing of binary liquid mixtures close to the critical point". Makhachkala, 1958. 12 pp (Acad Sci USSR, Order of Labor Red Banner Inst of Physical Problems im S. I. Vavilov), 150 copies (KL, No 2, 1959, 117)

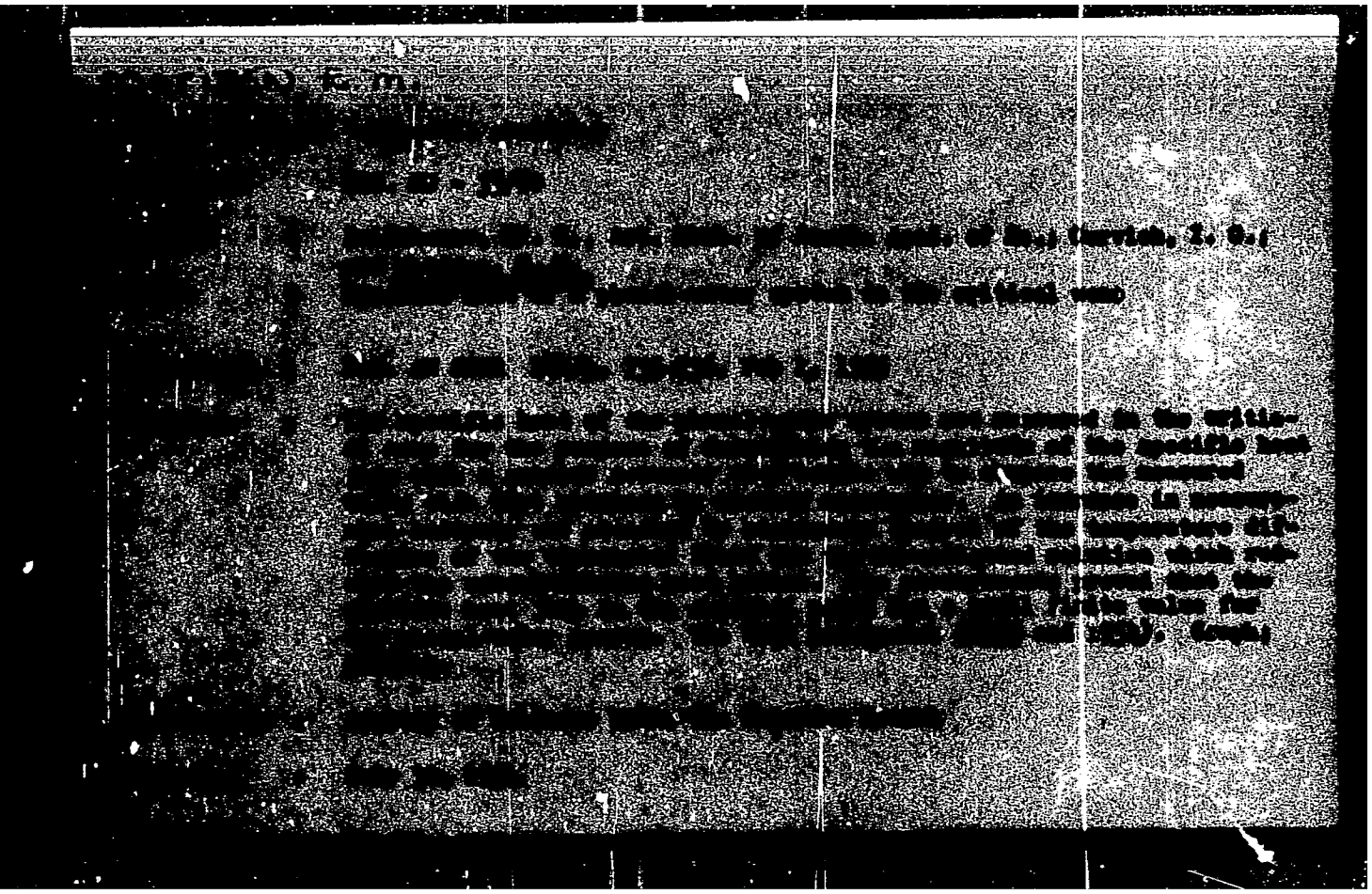
MATIZEN, E.V. (Novosibirsk)

"described a precision adiabatic high-temperature calorimeter for determination of the specific heat of substances at temperatures up to 2000°."

Report presented at the seminar on the problems of research on thermophysical properties of substances at high temperatures, Novosibirsk, 9-10 April 1962.







MATJASIC, Janez

A new cave folliculinid (Euciliata, Heterotricha) from Hercegovina. Biol vest no.10:49-53 '62.

1. Biloski institut Universe, Ljubljana.

MATJASIC, Janez

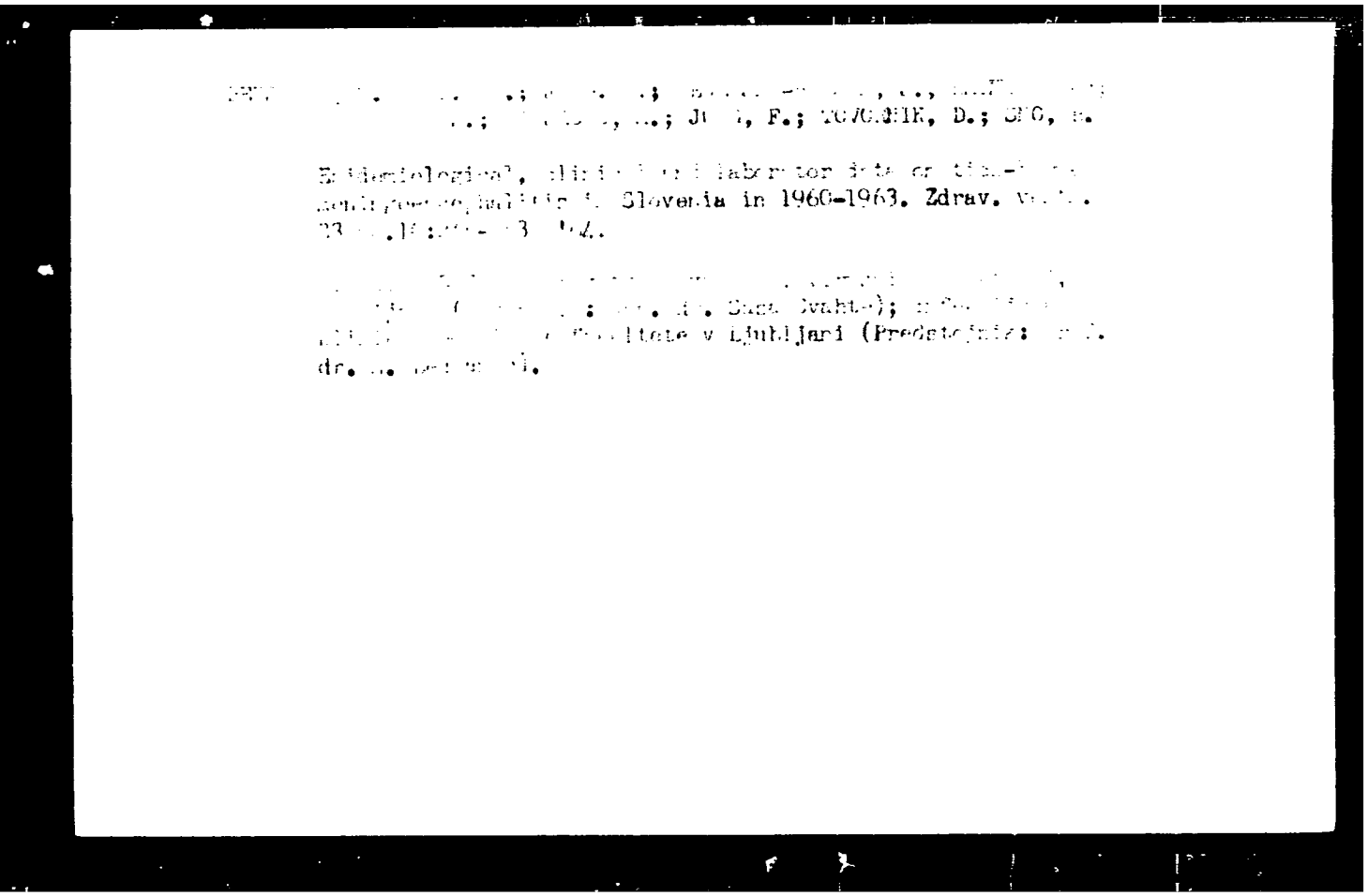
"Hemicephala of Yugoslavia. Biol inst 12:129-131 '64.

1. Biologic Institute of the University of Ljubljana, Ljubliana.
Submitted July 31, 1964.

JUNG, Mirko, dr.; VESENJAK-HIRJAN, Jelka, dr.; LULIC, Vladimir, dr.; MATJASIC, Marko, dr.; BLATNIK, Drago; SPALATIN, Josip, dr.; PRYDA-KAURICKY, Zeljko, dr.

Laboratory studies on the epidemic of poliomyelitis in Croatia in 1960. Lijecn. vjesn. 83 no.6:597-601 '61.

1. Iz Skole narodnog zdravlja "A.Stampar", Centralnog higijenskog zavod u Zagrebu, Serumskog zavoda u Zagrebu i Centralnog Higijenskog zavoda u Ljubljani.
(POLIOMYELITIS epidemiol)



MATJEW, M.; TOSZKOW, A.

On the interrelationship between the blood properdin level, antistreptolysin titer, leukocyte count and erythrocyte sedimentation rate in rheumatic fever and rheumatoid arthritis pat'ents. Reumatologia (Warsz.) 1 no.1:25-27 '63.

1. Z Kliniki Propedeutyki Chorob Wewnetrznych Akademii Medycznej w Sofii i Instytutu Mikrobiologii Bulgarskiej Akademii Nauk.

MATJASIC, M.; JUNG, M.; MOZETIC, M.; CERGOLJ, B.; [illegible]

Isolation, biological characteristics and [illegible] fication of adenoviruses in 1963. Zdrav. [illegible] 320-326 '64

1. Zavod SRS za zdravstveno varstvo, virusni [illegible], Ljubljana (Ravnatelj: [illegible] dr. Sasa Cvahte).

MATKARIMOV, M.T., assistent; SHUMAKHER, Ya.A., vrach

Biliary calculi in the vermiform appendix in acute appendicitis. Zdrav.Kazakh. 17 no.6:49-50 '57. (MIRA 12:6)

1. Iz kafedry gospital'noy khirurgii Kazakhskogo gosudarstvennogo meditsinskogo instituta im. V.M.Molotova.
(CALCULI, BILIARY) (APPENDICITIS)

MATKARIMOV, M.T., assistent

Some remarks on the use of metallic nails in fractures of the long bones. Zdrav.Kazakh. 17 no.7:40-42 '57. (MIRA 12:6)

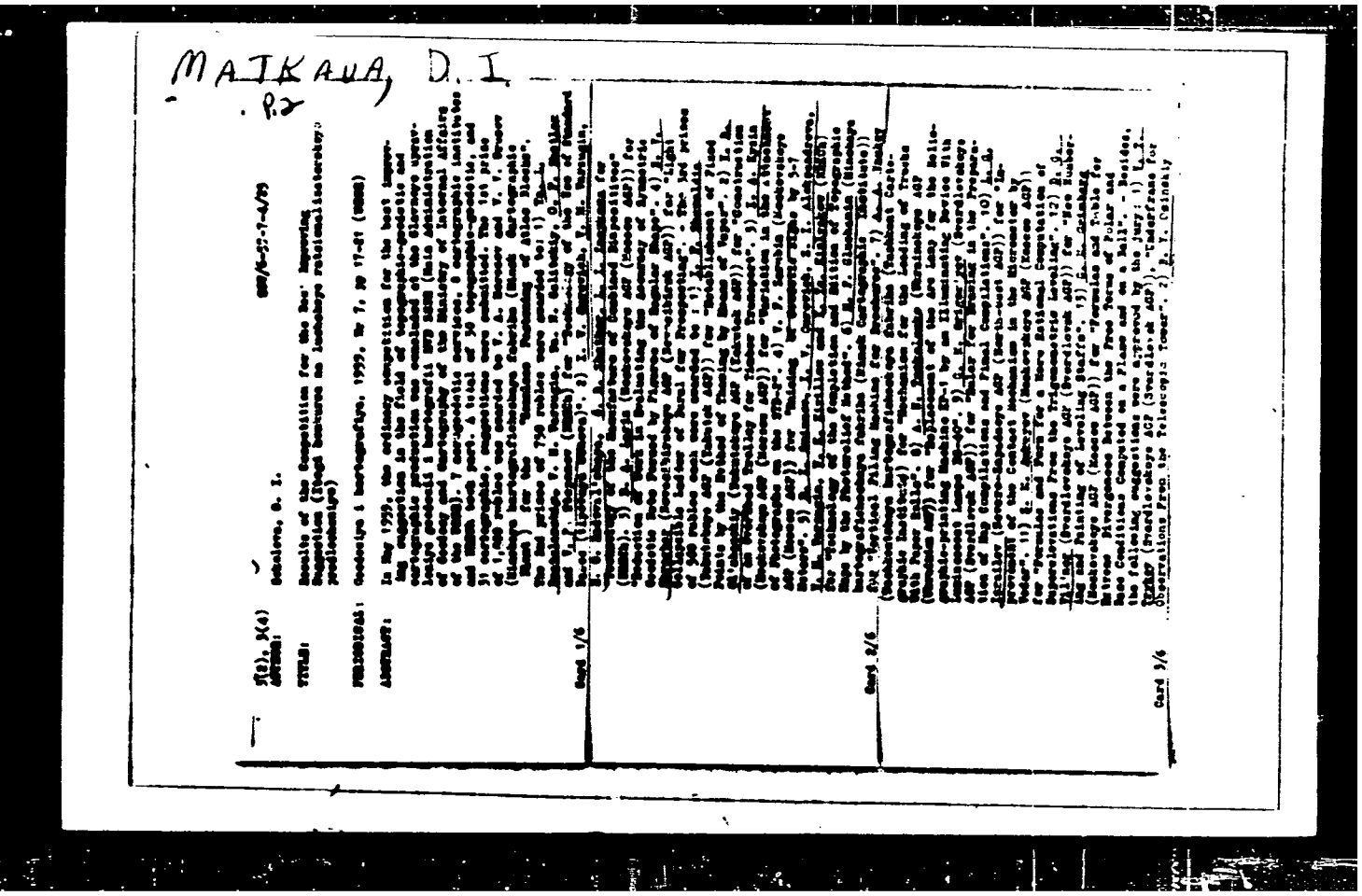
1. Iz kafedry gospital'noy khirurgii Kazakhskogo gosudarstvennogo meditsinskogo instituta im. V.M.Molotova.
(FRACTURES)

MATKARIMOV, M. T., CAND MED SCI, "EVALUATION OF INTRA-MEDULLARY NAILING AS A METHOD OF TREATING FRACTURES OF TUBULAR LONG BONES. (CLINICO-EXPERIMENTAL ~~INVESTIGATION~~)." ALMA-ATA, 1961. (JOINT ~~SCI~~ COUNCIL OF INSTITUTES OF PHYSIOLOGY, ~~MARGINAL~~ PATHOLOGY, CLINICAL AND EXPERIMENTAL SURGERY OF ACAD SCI KAZSSR). (KL, 3-61, 233).

[redacted], P.V.; MATKARIMOV, U.

Reserves distribution, and mobility of potassium in Sierozem soils of the Uzbek S.S.R. Pochvovedenie no.4:31-39 Ap '62.
(MIRA 15:4)

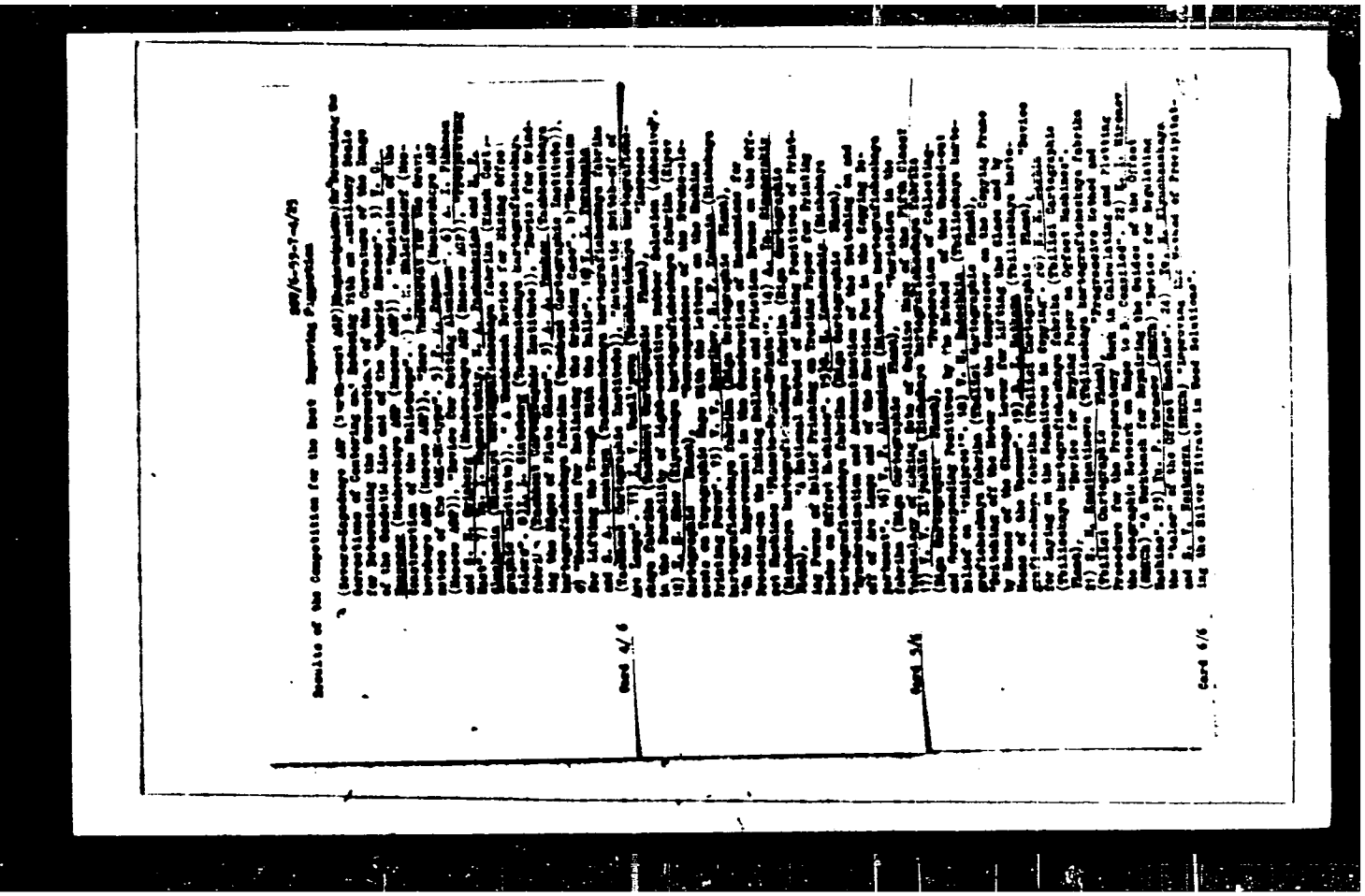
1. Ukrainskaya akademiya sel'skokhozyaystvennykh nauk.
(Uzbekistan--Sierozem soils) (Soils--Potassium content)



MAIKAUA, D. I.

P.2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R032932910001-1"



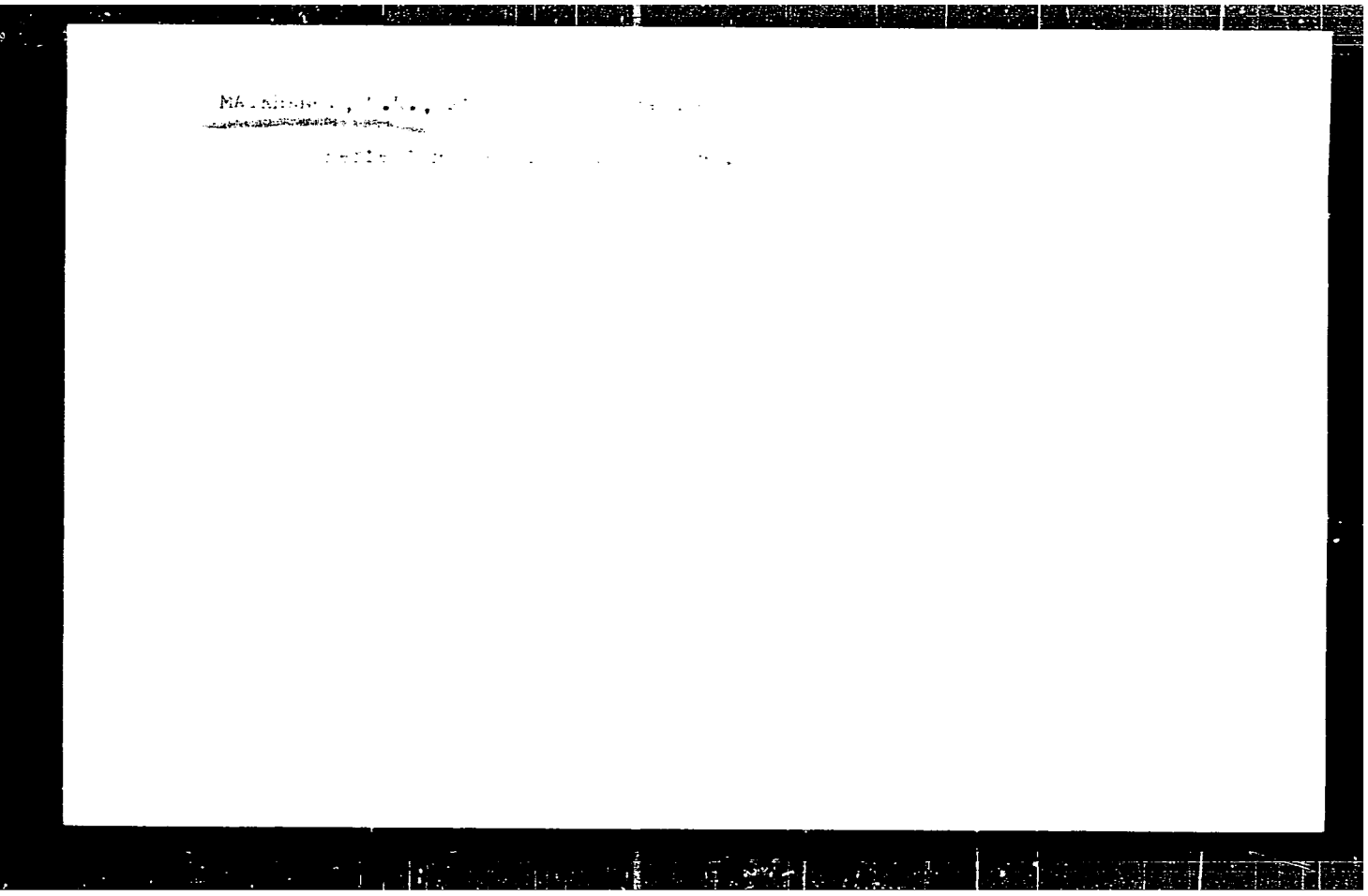
MATKEVICH, K.D., inzhener; SEYFULIN, V.I., inzhener.

Building a trestle-pile bridge with convolute supports. Transp. stroi. 6 no.2:22-23 F '56. (MLRA 9:6)
(Bridges, Pile)

SUKHORUKOV, B.I.; MATKHANOV, G.[illegible].

Specific interaction of purine and pyrimidine bases with the nucleic acid chain. Biofizika 8 no.1:113-114 '63. (MIRA 17:8)

1. Institut khimicheskoy fiziki AN SSSR, Moskva.



MATKHANOV, P. N.:

MATKHANOV, P. N.: "Problems of the synthesis of linear electrical circuits in time functions." [illegible]
Leningrad Electrical Engineering [illegible]
Leningrad, 1956.
(Dissertation for the degree of Doctor of Technical

So: Knizhnaya Letopis', No. 15, 1956

108-7-4/13

AUTHOR MATKHANOV, P. N.

TITLE On the Calculation of Circuits for the Formation of Rectangular Impulses.
(K raschetu tsepey dlya formirovaniya pryamougol'nykh impul'sov - Russian)

PERIODICAL Radiotekhnika, 1957, Vol 12, Nr 7, pp 23 - 29 (U.S.S.R.)

ABSTRACT The otherwise used methods for such calculations have the disadvantage that in their case it is assumed that the load resistance is lacking and that the capacity bridging the load resistance is neglected. The method given by the author is free from such disadvantages. The solution of the problem is carried out on the basis of the synthesis of the circuit according to two time-functions (at the input and outlet). The solution consists of two parts: the transition function of a physically possible circuit is obtained by means of the approach of the system function (or the corresponding transition characteristics) and then the formation of the circuit itself is carried out in accordance with transition function found. Approximation is carried out in a complex frequency range by means of the representation of the hyperbola function through the first multipliers of infinite sums. The calculation method is simple as regards the calculation as such and it makes it possible to take into account the load capacity. The characteristics of the circuit obtained is the following: the load is formed by the RC term and has an additional term of inductivity connected in parallel and effective resistance (which is c-

Card 1/2

108-7-4/13

On the Calculation of Circuits for the Formation of Rectangular Impulses.

qual to the load resistance). The results of the experimental investigations of the circuit obtained are given. The author states that the impulse form of the circuits obtained are fully sufficient.
(5 illustrations and 6 Slavic references).

ASSOCIATION Not Given.
PRESENTED BY
SUBMITTED 11.4.1956
AVAILABLE Library of Congress.
Card 2/2

MATKHANOV, P.N.

AUTHOR: Matkhanov, P. N. [illegible]

TITLE: The Most Simple Passive Electric Circuit for the Formation of a Linear Changing Voltage (Prosteyshaya passivnaya tsep' dlya formirovaniya lineyno izmenyayushchegosya napryazheniya)

PERIODICAL: Radiotekhnika, 1957, Vol. 12, Nr 12, pp. [illegible] (USSR)

ABSTRACT: The computation of the most simple circuit of the third degree for the formation of the linearly changing voltage on the basis of a synthesis of the circuit according to given reactions with respect to time is described. The solution of the first part of the synthesis - the task of approximation - is carried out within the domain of time. The condition for approximation consists in the fact that the reaction of the forming circuit (according to condition- of third degree) should differ only little from 1 in an interval of 1. The function obtained is a function of the input conductivity and is easily realized. The scheme of the forming circuit obtained in the course of this process of realization is given. This scheme warrants a sufficiently high degree of utilization of source-voltage with only a slight deviation of the reaction from the linear change. On the basis of the calculations and the forming circuit obtained the follow-

Card 1/2

The Most Simple Passive Electric Circuit for the Formation of [illegible] a Linear Changing Voltage

may be said: 1) The forming scheme is simple, and acceptable for use in practice. The existence of a material resistance R_c makes it possible to obtain a impulse with constant amplitude. 2) The utilization of voltage and the accuracy of scanning velocity is very high. If greater velocity deviations are permitted, an even greater degree of utilization of source voltage can be attained. 3) The results obtained considerably surpass the data of existing (passive) circuits of a linear scanning and give a rather complete idea of a synthesis of circuits of general nature.
There are 7 figures, and 2 references, 2 of which are Slavic.

SUBMITTED: April 11, 1956

AVAILABLE: Library of Congress

1. Electric current-Transfer 2. Mathematics-Theory

Card 2/2

MATKHANOV, Platon Nikolayevich -- awarded sci degree of Doc Tech Sci for the 25 May 56 defense of dissertation: "Problems of the synthesis of linear electrical circuits for temporary functions" at the Council, Leningrad Electrotech Inst imeni Ul'yanov (Lenin); Prot No 15, 7 Jun 58.

(BMVO, 11-58,27)

9(1,2) SOV/162-58-3-10/26

AUTHOR: Makhanov, P.N.

TITLE: The Synthesis of a Reactive Network for Shaping a Squared Sine Pulse (Sintez reaktivnykh tsepey dlya formirovaniya impul'sa v vide kvadrata poluperioda sinusoidy)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Radiotekhnika i elektronika, 1958, Nr 3, pp 70-73 (USSR)

ABSTRACT: The article contains the calculation of a passive reactive network for shaping squared sine pulses, based on the synthesis method. The author obtained a practically applicable circuit which consists only of a small number of elements. There are 1 circuit diagram, 1 graphs, and 3 references, 1 of which is English and 2 Soviet.

ASSOCIATION: Kafedra elektronno-ionnykh preobrazovateley Leningradskogo elektrotekhnicheskogo instituta (Chair of

Card 1/2

SOV/162-58-3-10/26

The Synthesis of a Reactive Network for Shaping a Squared Sine Pulse

Electronic and Ionic Converters of the Leningrad Electrical Engineering Institute)

SUBMITTED: February 3, 1958

Card 2/2

SOV-109-3-4-?/28

AUTHOR: Matkhanov, P. N.

TITLE: A Method of Realisation of the Transfer Functions of Minimum-Phase Networks by Cascaded Grounded Circuits (Ob odnom metode realizatsii funktsiy peredachi minimal'no-fazovykh tsepey kaskadnymi zazemlennymi skhemami)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 4, pp 467-477 (USSR)

ABSTRACT: The principle of the method proposed is as follows: the transfer function is represented (as is usual in multistage networks) in the form of a product of elementary factors representing the transfer functions of the first and the second order. Each factor or multiplier fulfils the requirements of a minimum-phase transfer function and can be realised in the form of a grounded circuit, in particular, in the form of a simple L-type element. If it is assumed that the voltage transfer function is $F(p) = U_2(p)/U_1(p)$,

Card 1/5

A Method of Realisation of the Transfer Functions of Minimum-Phase Networks by Cascaded Grounded Circuits

the circuit of Fig 1a can be described by:

$$\frac{U_1(p)}{U_2(p)} - 1 = \frac{N(p) - KM(p)}{KM(p)} = Z_2(Y_1 + Y_0) \qquad (2)$$

where Z_2 is the impedance of the series branch, Y_1 is the admittance of the parallel branch, and Y_0 is the load admittance. For the functions of the first and second order, it is possible to choose on the basis of Eq.(2) a pair or a number of pairs of positive real functions, Z_2 and Y_1, which can be realised with a minimum number of elements (for a given Y_0). It is thus possible to have various networks for a given transfer function. It is always possible to choose Z_2 and Y_1 in such a form that they can be realised by means of elementary calculations. The circuits of the link elements thus obtained have an input impedance which is a function of frequency. Various elements must therefore be matched when they are cascaded and, for this purpose the admittances of various elements

A Method of Realisation of the Transfer Functions of Minimum-Phase Networks by Cascaded Grounded Circuits

should be compensated by means of supplementary bipoles in such a manner as to obtain a constant impedance or an impedance of the first order. The auxiliary bipole is connected to the element in parallel. Since in the majority of cases the circuit elements are comparatively simple, the auxiliary networks can easily be realised. If the transfer function is given in terms of currents, that is, $F(p) = I_2(p)/I_1(p)$, the elementary L-circuit (see Fig.1b) can be described by: $I_1(p)/I_2(p) - 1 = Y_2(Z_1 + Z_0)$ (3)

The voltage transfer function of the first order can be expressed by Eq.(4) where $K = \alpha_1$ and $a_0 = \alpha_0/\alpha_1$. The function can be realised in a number of ways but only such networks are considered which give a maximum value of K. The resulting networks are shown in Figs.2. The elements of these elementary networks are determined from Eq.(5) on

A Method of Realisation of the Transfer Functions of Minimum-Phase Networks by Cascaded Grounded Circuits

the basis of the transfer function expressed by Eq.(4). The transfer function of the second order (expressed by Eq.(16) can be realised by the networks shown in Figs.3. The elements of these networks are evaluated for various values of the transfer function parameters. The above results are used to realise a transfer function:

$$F(p) = \frac{U_2(p)}{U_1(p)} = K \frac{p(p+2)(p^2+p+4)}{(p+3)(p^2+p3+10)(p^2+p2+3)}$$

The transfer function can be realised in two ways (see Figs.5) depending on the manner in which it is split into the elementary factors or multipliers. From the above analysis it is concluded that the method proposed has the following advantages: it is simple and permits the design of networks for various loads, and leads to a number of practical equivalent networks. The method can be regarded as being supplementary to the existing methods of transfer function

SOV-109-3-4-2/28

A Method of Realisation of the Transfer Functions of Minimum-Phase Networks by Cascaded Grounded Circuits

realisation. There are 5 figures and 3 Soviet and 1 English references.

SUBMITTED: October 24, 1956

1. Electrical networks--Mathematical analysis 2. Functions--Analysis

Card 5/5

SOV/112-59-18-39359

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, Nr 18, p 183 (USSR)

AUTHORS: Matkhapov, P.N., Petrov, Yu.A.

TITLE: Circuit for the Series Connection of Commuting Devices in Powerful High-Voltage Generators of Square Pulses

PERIODICAL: Izv. Leningr. elektrotekhn. in-ta, 1958, Nr 35, pp 65 - 73

ABSTRACT: Two circuits of series connection of electronic and ionic commuting devices are given, which are used for the generation of powerful high-voltage square pulses. Such circuits are employed in those cases when the rated capacity and voltage of thyratrons and electronic modulation tubes are considerably lower than required. Making use of the principle of the well-known Arkad'yev - Marks multiplication circuit the authors improved it by introducing a special multi-winding choking coil, which resulted in a considerable constructional simplification of the circuit The calculation formulae for the designing of the choking coil are given.

K.V.B.

Card 1/1

SOV/142-2-1-7/22

9(9)
AUTHOR: Matkhanov, P.N.

TITLE: The Synthesis of Linear Circuits Shaping Pulses of a Given Shape By Disintegrating Integer Functions Into Infinite Derivatives (Sintez lineynykh tsepey, formiruyushchikh impul'sy zadannoy formy, razlozheniyem tselykh funktsiy v beskonechnyye proizvedeniya)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - radiotekhnika, 1959, Vol 2, Nr 1, pp 58-64 (USSR)

ABSTRACT: In pulse engineering, it is frequently required to design linear electrical circuits for generating pulses of a given or an arbitrary shape. The calculations of such circuits are usually performed by the linear circuit synthesis method according to a given transient characteristic. In this operation, the approximation is one of the first and most important tasks, i.e. obtaining the transmission function of a physically possible circuit, whose transient characteristic is close to the given

Card 1/3

The Synthesis of Linear Circuits Shaping Pulses of a Given Shape, By Disintegrating Integer Functions Into Infinite Derivatives

transient characteristic. In this paper, the author investigates one of the possible solutions of the approximation problem in a complex frequency range, where the approximation is subjected to a system function: $F(p) = pL\ f(t)$. The author assumes that the transcedental member of the system functions are exponents and bases his method on the disintegration of hyperbolic functions into infinite products. Using the synthesis method, explained by the author for pulses possessing symmetry or anti-symmetry, results in transmission functions which may be easily realized by real two circuits. The method shows an adequate convergence with the time domain.

SOV/142-2-1-7/12

The Synthesis of a Linear Circuit Shaping Pulses of a Given Shape, By Disintegrating Integer Functions Into Infinite Derivatives

There are 1 circuit diagram, 1 graph and 4 references, 2 of which are American and 2 Soviet.

ASSOCIATION: Kafedra elektronno-ionnykh priborov Leningradskogo elektrotekhnicheskogo instituta imeni Ul'yanova (Lenina) (Chair of Electronic-Ionic Devices of the Leningrad Institute of Electrical Engineering imeni Ul'yanov (Lenin))

SUBMITTED: May [illegible], 1957

Card 3/3

MATKHANOV, P.N.

Synthesis of pulse shape correcting networks in tube-type pulse modulators. Nauch. dokl. vys. shkoly; radiotekh. i elektron. no.2: 109-116 '59. (MIRA 14:1)

1. Kafedra elektronno-ionnykh preobrazovateley Leningradskogo elektrotekhnicheskogo instituta.
(Pulse techniques (Electronics))

8(3) SOV/14[illegible]-59-3-3/20

AUTHOR: Matkhanov, P.N., Docent

TITLE: The Calculation of High-Power Pulse Transformers for Lengthened Pulses (Raschet moshchnykh impul'snykh transformatorov dlya impul'sov bol'shoy dlitel'nosti)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Energetika, 1959, Nr 3, pp 18-27 (USSR)

ABSTRACT: Calculation problems of microsecond pulse transformers are adequately covered in literature, while there is no information available on lengthened pulse transformers. Transforming lengthened rectangular voltage pulses will require a greater number of windings N, resulting in a higher wave impedance z_T. Matching z_T with the load impedance R will require increased pulse transformer dimensions. For this reason, the author presents a calculation method taken into consideration only inductance leakage and the magnetizing inductance. The author says that matching is not required for performing the calculations for the pulse

Card 1/3

The Calculation of High-Power Pulse Transformers for Lengthened Pulses

transformer, which means neglecting the winding capacitance. He uses only the inductance leakage for determining the leading pulse edge. Thereby the error in determining the leading pulse edge length will not exceed 5%, if the degree of matching is $z_T/R \geqslant 3.5$. This calculation method is based upon the complex consideration of the requirements for the most important pulse transformer characteristics. Thereby, the latter are represented as functions of one common constructional parameter $X = \sqrt{SN}$ (S designates the cross section of the transformer core). The author presents the relations connecting X with constructional, electrical and power characteristics and with the corresponding optimum conditions. When selecting a compromise value of the parameter X, satisfying to a high degree the requirements for the basic pulse transformer characteristics (which are often contradictory), a relatively weak change of the corresponding functions should be made in the vicinity of their

SOV/143-59-3-3/20

The Calculation of High-Power Pulse Transformers for Lengthened Pulses

extreme values. The author presents formulae for the parameters of the pulse transformer substitution circuit, for constructional characteristics, for the output pulse shape, and for the power characteristics. He also indicates the sequence of electrical calculations for a pulse transformer. In an annex he presents an example for calculating a transformer for 10^{-3} second pulses. There are 2 diagrams, 1 graph and 4 Soviet references.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut imeni V. I. Ul'yanova (Lenina) (Leningrad Institute of Electrical Engineering imeni V.I. Ul'yanov (Lenin)) Kafedra elektronno-ionnykh preobrazovateley (Chair of Electron-Ion Converters)

SUBMITTED: October 27, 1958

Card 3/3

66305

~~9(7), 9(5)~~ 9.2120 SOV/143-59-5-1/19

AUTHOR: Ivanov, V.I., Doctor of Technical Sciences, Professor and Matkhanov, P.N., Docent

TITLE: The Calculation of Cascade-Connected Pulse Transformers

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Energetika, 1959, Nr 5, pp 1-9 (USSR)

ABSTRACT: The authors explain an engineering calculation method of cascade-connected pulse transformers, under the condition of providing a given shape of the output pulse. Cascade-connected pulse transformers are used in acceleration engineering for producing high pulse voltage or for testing pulse insulation devices. The basic requirement for pulse transformers is that they do not distort the shape of the pulse to be transformed. The calculation method is based on presenting the basic pulse transformer parameters in functions of design parameter $X = \sqrt{SN}$, [Ref 1], where S - is the cross section of the core and N - the number of high voltage turns. The selection of the optimum magnitude X_{opt} is

Card 1/3

The Calculation of Cascade-Connected Pulse Transformers

derived from the condition of satisfying the basic requirements for pulse transformers. The authors present substitute calculation circuits and determine the substitute parameter circuits [Ref 1] by P.N. Matkhanov. They also furnish directions for improving the pulse shape. At LETI, the model of a cascade consisting of two pulse transformers for 800 kv with a pulse duration of 7.5 microseconds was built using the method explained in this article. A satisfactory agreement of the output pulse shape with the calculated data was obtained. Concerning the design of the cascade, the most simple one is placing the cascade elements on top of each other in one common tank made of insulating material and filled with transformer oil. The dimensions of the tank must be such as to prevent discharges along its surface. There are 4 circuit diagrams, 1 graph and 2 Soviet references. This report was presented by the Kafedra elektronno-ionnykh preobrazovateley (The Chair of Electronic - Ionic Converters) and delivered at the scientific and technological conferenceof LETI im V.I. Ul'yanova Lenina in April, 1958.

66305
SOV/143-59-5-1/19

The Calculation of Cascade-Connected Pulse Transformers

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut imeni V. I. Ul'yanova (Lenina) (Leningrad Electrical Engineering Institute imeni V.I. Ul'yanov (Lenin))

SUBMITTED: March 16, 1959

Card 3/3

MATKHANOV, P.N., dotsent, doktor tekhn. nauk

Synthesis of reactive three-terminal networks for the shaping of square pulses. Izv. LETI no.38:249-257 '59. (MIRA 13:8)
(Pulse techniques (Electronics))

24202

S/143/61/000/006/002/003
D253/D301

9,2540

AUTHORS: Grigor'yev, V.T., Engineer, Matkhanov, P.N., Docent

TITLE: Long pulse power generator with a shaping circuit and with energy storage in inductances

PERIODICAL: Energetika, no. 6, 1961, 31 - 35

TEXT: The authors describe one of the possible varieties of a generator with an inductive energy storage. Short pulse low power generators normally utilize the capacitive storage of energy. In the generators of longer pulses and higher power the inductive storage of energy becomes more practical, since this system does not require large capacities. On breaking the circuit the stored energy is passed over to the load inserted in parallel with the shaping circuit. In the subsequent shaping circuits the pulse current through the load equals 1/2 of the current in the inductance. The main disadvantage of this system is the need for a commutator. The circuit diagram of the system is depicted in Fig. 2, where L_0 is

Card 1/4

S/143/61/000/006/002/003
D253/D301

Long pulse power generator ...

the energy storing inductance; C_o is the shaping circuit capacitance charged by a separate source to the voltage U_o; L_k - C_k are the parameters of the series resonant circuit; R is the load resistance; $C_б$ is a large blocking capacitance; $Л_1$ - charging thyratron; $Л_2$ - commutating thyratron; $Л_3$ - a gasetron.

Fig. 2.

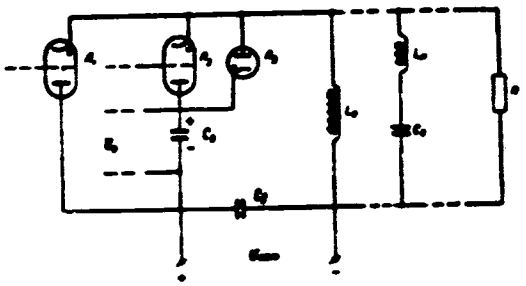


Рис. 2

Card 2/4

Long pulse power generator ...

The system works as follows: A control pulse at time t_1 opens the thyratron valve $Л$, and thus initiates the flow of energy to L_0. If at t_2 another control pulse opens the thyratron $Л_2$, the capacitance C_0 is charged. With the polarity of the initial charge in C_0 shown in the diagram, the current through $Л$, decays and the current to L_0 flows through C_0, $Л_2$ and the shaping circuit with the load. The charge in C_0 decreases to zero. If the time of discharge of C_0, Δt, is sufficient to deionize the thyratron - $Л$, will not strike. $Л_3$ permits the two-way conduction through C_0. After the passage of the pulse and deionization of $Л_2$ the system is ready for the next cycle: charging - switching over - pulse shaping. The deionization time is very important. $C_{o\ min}$ (the smallest value ensuring normal operation of the circuit) determines the minimum length of pulse which can be obtained for a given U_0. In the case of mercury thyratrons the minimum length is of the order of a few milliseconds. The reduction of the deionization time can be achieved by increasing the bias on the grid and selecting a sufficiently large

Card 3/4

Long pulse power generator ...

capacitance in the bias circuit. The time of flow of current through Π_2 is approximately equal to the length of rise of current in the pulse. Π_1 conducts during the time of rise of current from zero to its maximum value. This time is approximately equal to $2\frac{L_o}{r_o}$, where r_o is the resistance of the winding. For the iron core inductances this time is approximately 0.1 - 0.15 seconds. The thyratron is so chosen that its permissible peak current is greater than the charging current. This circuit can be earthed at any point. The operation of this system was verified on a small power model, whose circuit diagram is also depicted. There are 4 figures and 2 Soviet-bloc references.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut imeni V.I. Ul'yanova (Leningrad Electrotechnical Institute, imeni V.I. Ul'yanov (Lenin)

PRESENTED: July 7, 1960, by the kafedra teoreticheskikh osnov elektrotekhniki (Department of the Theoretical Bases of Electrical Engineering)

ACCESSION NR: AT4017560 S/3074/62/000/047/0136/0140

AUTHORS: Matkhanov, P. N. (Doctor of technical sciences, Professor); Grigor'yev, V. T. (Docent)

TITLE: Diagram of generator for long high-power pulses with inductive storage

SOURCE: Leningrad. Elektrotekhnicheskiy institut. Izv., no. 47, 1962, 136-140

TOPIC TAGS: pulse generator, long pulse generator, inductive storage, gas discharge tube switching, pulse flatness correction, ignitron, thyratron, gas filled diode

ABSTRACT: In view of the difficulties involved in generating long rectangular pulses (on the order of several or several times ten milliseconds) with capacitive storage and electronic modulator tubes, a generator is proposed with inductance storage, in which the commu-

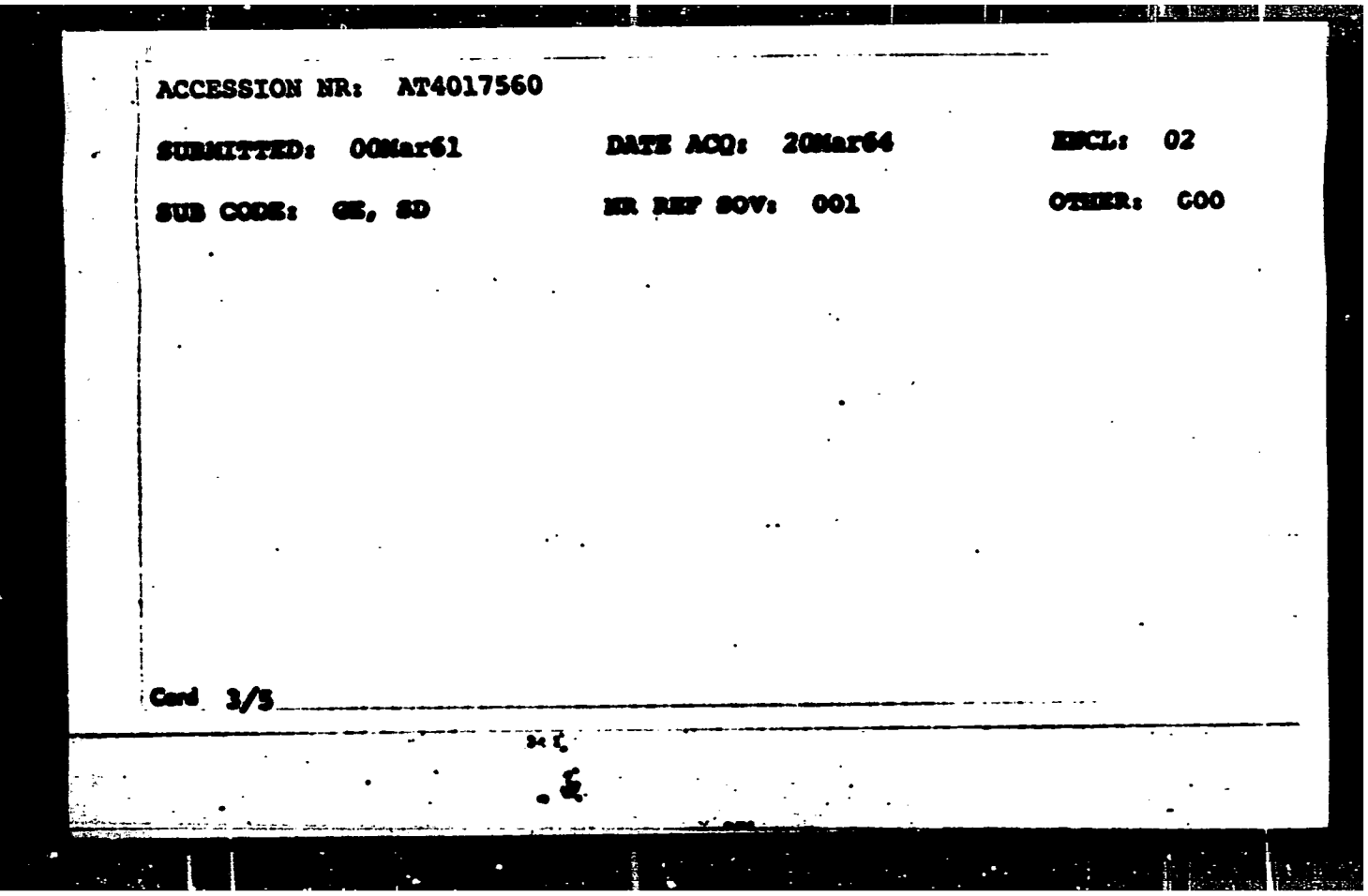
Card 1/3

ACCESSION NR: AT4017560

tation is effected by ordinary controlled gas-discharge tubes (thyratrons or ignitrons) in analogy with the capacitor switching circuit. The correction for the drooping top of the pulse is also considered. It is shown that the operation of the circuit depends appreciably on the thyratron deionization time, which can be decreased by increasing the bias voltage and increasing the capacitance in the bias circuit, or else by using specialized thyratrons. The circuit was tested using TRI-6/15 mercury vapor thyratrons and a VG-129 gas filled diode, an inductance of 1 henry, and a correcting capacitance of 8 microfarads. The load resistance was 50 ohms, and the pulse duration was 6 milliseconds. The authors are grateful to M. M. Fedorova for help in the construction and adjustment of the breadboard." Orig. art. has: 2 figures.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut (Leningrad Electrotechnical Institute)

Card 2/5



ACCESSION NR: AT4017560

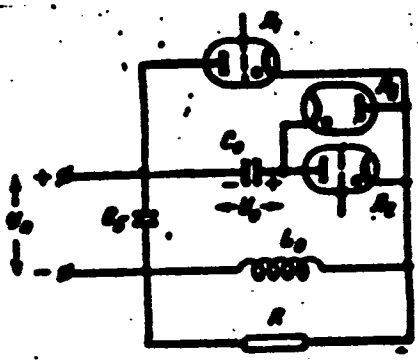
SUBMITTED: 00Mar61 DATE ACQ: 20Mar64 ENCL: 02

SUB CODE: GE, SD NR REF SOV: 001 OTHER: 000

Card 3/3

ACCESSION NR: AT4017560

ENCLOSURE: 01



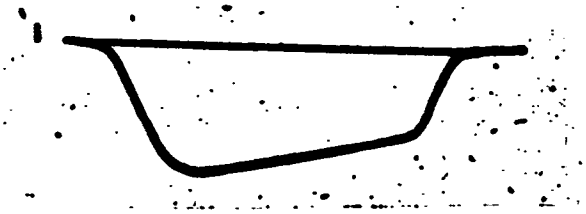
Schematic diagram of pulse generator with inductive storage

R - load resistance, C_0 - correcting capacitor, C_b - blocking capacitor of large value designed for a voltage equal to the power supply voltage. A_1, A_2, A_3 - charging and switching thyratrons and gas-filled diode.

Card 4/5

ACCESSION NR: AT4017560

ENCLOSURE: 02



Oscillogram of load pulse waveform

Card 5/5

MATKHANOV, P. N., dokter tekhn. nauk, dotsent; PETROV, Yu. A., assistant

Calculation of the pulse-droop compensating [illegible] of pulse transformers. Izv. LETI 59 no.46:123-133 '62. (MIRA 15:10)

(Pulse circuits) (Electric transformers)

ATABEKOV, G.I.; BASHARIN, A.V.; BOGORODITSKIY, N.P.; BULGAKOV, K.V.; VASIL'YEV, D.V.; YEGIAZAROV, I.V.; YERMOLIN, N.P.; KOSTENKO, M.P.; MATKHANOV, P.N.; NOVASH, V.I.; NORNEVSKIY, P.I.; RUTSKIY, A.I.; RYZHOV, P.I.; SOLOV'YEV, I.I.; SOLODNIKOV, G.S.; SLEPYAN, Ya.Ya.; SMUROVA, N.V.; TINYAKOV, N.A.; FATEYEV, A.V.; FEDOSEYEV, A.M.; SHABADASH, B.I.; SHCHEDRIN, N.N.

Viktor Ivanovich Ivanov, 1900-1964; obituary. Izv. vys. ucheb. zav.; energ. 8 no.1:122-123 Ja '65.

(MIRA 18:2)

MATKHANOV, P.N.; DMOKHOVSKAYA, N.I.

Calculation of reactive circuits for shaping rectangular pulses using the peak voltage supply of the source. Izv. vys. ucheb. zav.: radiotekh. 8 no.5:605-607 S-O '65.

(MIRA 18:12)

1. Submitted November 17, 1964.

ACC NR: AP7004338 SOURCE CODE: UR/0106/66/000/011/0046/0050

AUTHOR: Matkhanov, P. N.; Petrov, Yu. A.; Danilov, L. V.

ORG: none

TITLE: Synthesizing passive circuits intended for shaping pulses that have a bell-shaped envelope

SOURCE: Elektrosvyaz', no. 11, 1966, 46-50

TOPIC TAGS: pulse shape, pulse shaper

ABSTRACT: Synthesizing the reactive quadripoles is considered which produce, in a resistive load, a pulse with a bell-shaped envelope when a unit step voltage is applied to the quadripole input. The function $\sin t$ can be regarded as a zeroth approximation to the bell-shaped envelope; the function $\sin^2 t$, as a first approximation; the function $\sin^3 t$, a second approximation, etc. Then, the

Card 1/2 UDC: 621.374

ACC NR: AP7004338

corresponding pulses will be described by: where the pulse amplitude is unity-normalized, and the pulse duration is π-normalized. An approximate formula for the transfer function of a physically realizable quadripole is derived, and its use is illustrated by two numerical examples.

$$u_1(t) = \begin{cases} \sin t \sin \omega_0 t & 0 \leq t \leq \pi, \\ 0 & t > \pi; \end{cases}$$

$$u_2(t) = \begin{cases} \sin^2 t \sin \omega_0 t & 0 \leq t \leq \pi, \\ 0 & t > \pi; \end{cases}$$

$$u_3(t) = \begin{cases} \sin^3 t \sin \omega_0 t & 0 \leq t \leq \pi, \\ 0 & t > \pi. \end{cases}$$

. . . . . .

This important effect is noted: if a step voltage E is applied to the quadripole, the pulse height in the resistive load may reach a value of kE where $k > 1$ (in one of the numerical examples, $k = 10$). Such a high voltage gain permits using lower-voltage power-supply sources and switching devices. Passive shaping quadripoles are recommended when the ratio of pulse duration to carrier period does not exceed 20—30. Orig. art. has: 3 figures and 12 formulas.

SUB CODE: 09 / SUBM DATE: 29Nov65 / ORIG REF: 004

Card 2/2

L 2569-66

ACC NR: AP6012962 SOURCE CODE: UR/0143/65/000/001/0122/0123

AUTHOR: Atabekov, G. I.; Basharin, A. V.; Bogoroditskiy, N. P.; Bulgakov, K. V.; Vasil'yev, D. V.; Yegiazarov, I. V.; Yermolin, N. P.; Kostenko, M. P.; Mikhanov, P. N.; Novash, V. I.; Nornevskiy, B. I.; Rutskiy, A. I.; Ryabov, P. I.; Solov'yev, I. I.; Solodovnikov, G. S.; Slepyan, Ya. Yu.; Smirnova, N. V.; Tinyakov, N. A.; Fateyev, A. V.; Fedoseyev, A. M.; Shabadash, B. I.; Shchedrin, N. N.

ORG: none

TITLE: Obituary for Ivanov, Viktor Ivanovich

SOURCE: Izvestiya vysshikh uchebnykh zavedeniy. Energetika, no. 1, 1965, 122-123

TOPIC TAGS: academic personnel, electronic personnel, electronics

ABSTRACT: Viktor Ivanovich Ivanov, Dr. of Tech. Sciences, professor of the Leningrad Electrotechnical Institute imani V. I. Ulyanov, died 24 August 1964. He was born in 1900, was the first teacher of special relay protection of power equipment in the USSR, outlining the principles of the new discipline in a monograph published in 1932. In recent years, Ivanov has concentrated in the development of the teaching of industrial electronics and pulse technology in the Leningrad Institute. [JPRS]

SUB CODE: 09 / SUBM DATE: none

Card 1/1 LK

L 04172-67 EWT(1)

ACC NR: AP6027556 SOURCE CODE: UR/0143/66/000/005/0028/0032

AUTHOR: Matikhanov, P. N. (Professor); Gogolitsyn, L. Z. (Docent); Grigor'yev, V. T. (Docent); Goy, A. I. (Engineer)

ORG: Leningrad Electromechanical Institute im. V. I. Ul'yanov (Lenin) (Leningradskiy elektromekhanicheskiy institut)

TITLE: A generator of powerful videoimpulses with an induction accumulator

SOURCE: IVUZ. Energetika, no. 5, 1966, 28-32

TOPIC TAGS: video signal, generator, pulse accumulation

ABSTRACT: The article gives details of an impulse generator with an induction accumulator and describes a method for its calculation. Figure 1 shows the electrical circuit used. In charging, the current in the impedance accumulator rises according to an exponential law

$$i_1 = \frac{U_0}{R}\left[1 - \exp\left(-\frac{R}{L}t\right)\right], \qquad (1)$$

where R is the active resistance of the impedance. A figure gives curves showing the change of the current in the impedance and of the

Card 1/2 UDC: 621.373.029.33

L 04172-67
ACC NR: AP6027556

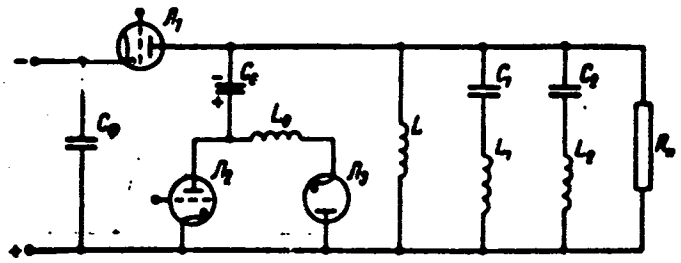


Figure 1.

voltage on the load. Advantages of the new scheme are: a) the reliability of an induction accumulator is considerably greater than that of the condensers of a capacitance accumulator; b) the feed to the generator can be a low voltage source; in many cases the generator can be fed directly from a circuit with the use of small dimension semiconductor rectifiers. Orig. art. has: 10 formulas and 3 figures.

SUB CODE: 09/ SUBM DATE: 06Jul65/ ORIG REF: 002

Card 2/2 LC

MATKHANOV, V.N.; Inzh.

Electric Welding

Adaptation of Kovalev's method by electric welders. Avtog.delo 23 No. 3, 1952.

SO: Monthly List of Russian Accessions, Library of Congress, June 1952, Uncl.

MATKHANOV, V.N., Nachal'nik.

Some remarks on the book "Information manual for welders." Avtog.delo 24 no.5:31-32 My '53. (MLRA 6:5)

1. Svarochnoe biuro IETP im. Knybysheva. (Welding)

MATKHANOV, V N

135-58-6-7/19

AUTHORS: Shorshorov, M.Kh., Candidate of Technical Sciences, and Matkhanov, V.N., Engineer

TITLE: Investigation of Weldability and Development of Multilayer Welding Technology for Heat-resistant Pearlite Steel Rotor (Issledovaniye svarivayemosti i razrabotka tekhnologii mnogosloynoy svarki rotora iz teploustoychivoy perlitnoy stali)

PERIODICAL: Svarochnoye Proizvodstvo, 1958, Nr 6, pp 18-23 (USSR)

ABSTRACT: Weldability of heat resistant steel "EI415" and "30KhM" was studied jointly at the authors' institute with the Welding Department of TsNIITMASh. The "IMet-1" method [Ref. 1] was used, which makes it possible to find the permissible cooling rate in the base metal zone adjacent to the weld seam, i.e. a cooling rate that assures good mechanical properties and crystalline structure excluding the forming of cold cracks at welding. The composition of the two investigated steel grades and of the weld metal produced by electrodes "LKZ-70M" is given. The observations made in experiments are described and illustrated by graphs and micro-photographs. The permissible cooling rate of weld-adjacent zone was found

Card 1/2

135-58-6-7/19

Investigation of Weldability and Development of Multilayer Welding Technology for Heat [illegible] Pearlite Steel Rotor

to be 25°C/sec for steel "EI415" and 8°C/sec for steel "30KhM". The article includes calculations, based on the permissible cooling rate, which were applied in developing the technology of manual multi-layer welding. The developed welding technology for a model of steel "EI415" used in a turbine rotor neck of 205 mm diameter and 40 mm thickness, is described in detail. Temperatures of 660-680°C are recommended for annealing after welding. Chief of the TsNIITMASh Welding Department, L.M. Yarovinskiy; Chief of the Leningrad imeni Kirov Plant's Welding Department, S.K. Zvegintsev; and Engineer I.A. Zaks; participated in the work. There are 9 figures, 6 tables and 5 Soviet references.

ASSOCIATION: Institut metallurgii imeni Baykova AN SSSR (Metallurgic Institute imeni Baykov AS USSR)

AVAILABLE: Library of Congress

Card 2/2

MATKHANOV, V.N., kand. tekhn. nauk; KHISMATULIN, Ye.R., inzh.; Prinimala uchastiye PIROGOVA, V.A., insh.

Restoring the frames of screw high-pressure apparatus. Khim. i neft. mashinostr. no.1:28-30 Jl '64. (MIRA 17:12)

GUREVICH, Lev Isayevich, kand. tekhn. nauk; MATKHANOV, Vasiliy Nikolayevich, inzh.; SAVIN, M.G., inzh., retsenzent; VOL'MAN, L.N., red.

[Masters of the blue flame] Mastera golubogo ognia. Irkutsk, Vostochno-Sibirskoe knizhnoe izd-vo, 1964. 77 p. (MIRA 18:3)

MATKO, I.

YUGOSLAVIA/Human and Animal Physiology - Blood. Blood Diseases. T-4

Abs Jour : Ref Zhur - Biol., No 10, 1958, 45987

Author : Accetto, B., Matko, I.

Inst : RPFY [Republique Populaire Federative de Yugoslavie] Academy.

Title : Unvovering Latent B_{12}-Avitaminosis with Curettage of Buccal Mucosa.

Orig Pub : Bull. scient. Conseil acad. RPFY, 1956, 2, No 4, 106

Abstract : In B_{12} deficiency, biopsy specimens of the squamous epithelium of the buccal mucosa reveal the presence of cells with large round or oval nuclei, whose karyoplasma showed a retiform, comblike, or fine-granular structure. Similar but less intensive changes were found in some cases where there were no symptoms of anemia. After B_{12} was administered, however, cytomorphological changes

Card 1/2

YUGOSLAVIA/Human and Animal Physiology (Normal and Pathological). T-3
Blood. Blood Diseases.

Abs Jour : Ref Zhur - Biol., No 16, 1958, 74705

Author : Accetto, Bojan; Matko, Ivan
Inst : -
Title : On the Cytodiagnostic of B_{12} of Avitaminosis (Expressed and Latent).

Orig Pub : Raspr. Slov. akad. znan. in umetn. Razr. prirodosl. in med vede, 1957, Cl. 4, No 1, 35-45.

Abstract : In scrapings of the mucosa cavity of the mouth in patients with megaloblastic anemia, pathognomonic changes of cells were found of the squamous epithelium, when in the blood and bone marrow characteristic deviations were still absent. Less expressed but permanent changes were noted in these cells with reaction of the stomach, achylia, signs of funicular myelosis and others. Cells of the oral mucosa cavity were made to appear normal during treatment with

Card 1/2

YUGOSLAVIA/Human and Animal Physiology (Normal and Pathological). T-3
Blood. Blood Diseases.

Abs Jour : Ref Zhur - Biol., No 16, 1958, 74705

vitamin B_{12}. The investigation of the scraping of the oral mucosa is a simple method of early diagnosis of the premegaloblast phase of avitaminosis B_{12}. -- I.I. Yurovskaya.

Card 2/2

MATKO, Josef

Quality of vehicle repair works. Vasut 8 no.3:21-22 30 Ap '58.

MATKO, Jozsef, okleveles gepeszmernok

New management and working system in the vehicle repair shops of the Hungarian State Railways. Vasut 14 no. 1: 10-12 Ja '64.

MATKO, Jozsef

Modern repair of freight cars of the Hungarian State Railways. Vasut 14 no.9:4-6 S '64.

MATKO, L. 1948

(Debrecen Tud. Belklinikajanak es Korbonctani Intezetenek Kozlemenye)

"Bone Marrow and Anaphylaxis."

Mag. Belor. Arch. Budapest. 1948, 1/6(331-345)
Abst: Exc. Med. V. Vol. 11, No. 5, p. 360

MATKO, L. 1951

(Dept. of Path. Anat. & Histol., U. of Debrecen)

"The Effect of Chronic Colchicine Intoxication on Hemogram and Bone Marrow."

Acta Morphol. (Budapest), 1951 1/3(441)
Abst: Exc. Med. 11, Vol. 5, No. 12, p. 1390

MATKÓ, L.

Excerpta Medica Sec 16 Cancer Vol. 2/2 Feb 54

500. MATKÓ L. and HARASZTI A. Dept. of path. Anat., Univ. of Debrecen *The effect of chronic colchicine intoxication on the blood count and on the bone marrow* Acta Morphol. (Budapest) 1952, 2/2 (219–230) Graphs 2 Tables 7 Illus. 2

Chronic colchicine poisoning in rats produces an aplastic bone marrow with progressive fibrosis. No extramedullary haematopoiesis was observed. Lajtha – Oxford

L. MATKO, L. HOLCZINGER

"The effect of nuclear poisons on the kidney of the rat." p. 416 (ACTA MORPHOLOGICA ACADEMIAE SCIENTIARUM HUNGARICAE, Vol. 2, No. 4, 1952, Budapest, Hungary)

SO: Monthly List of East European Accessions, L.C., Vol. 2 No. 7, July 1953, Uncl.

MATKO, Laszlo

Chemical Abst.
Vol. 48 No. 4
Feb. 25, 1954
Biological Chemistry

Effects of acute and chronic colchicine poisoning on the organs of the rat. Béla Kellner and László Matkó. *Acta Morphol. Acad. Sci. Hung.* 3, 125–48(1953).—The most marked changes were in organs in which mitotic forms abound. The nuclear changes included: division of cells arrested in metaphase; the chromatin substance shrinks and pyknomitoses resembling a rosette are developed. The pyknomitotic forms yield either minute nuclear fragments, basophil globules, or spherical cells surrounded by homogeneous cytoplasm. Injury to nondividing cells results in pyknosis of the nuclei. Multinuclear giant cells are frequently formed from the cells of the liver, kidney, and testicular tubules. Cytoplasm changes result in edematous loosening, vacuolization, granulation, and parenchymal degeneration. The first changes appear in 30–60 min., nuclear changes occur after 2 hrs., and reorganization by the 48th hr. (in the testis 72 hrs.). The affected cells desquamate, are taken up in the lymph sinuses or phagocytized by the cells of the reticulum. Repeating administration of colchicine produces the same effect as a single injection. Acute poisoning exerts a generalized toxic action. Chronic poisoning corresponds to a serial recurrence of acute effects. Chronic treatment results in the following changes: fibrosis of bone marrow, hyperplasia of the reticulum, and formation of giant cells in lymphoid organs; mild fibrosis of spleen; variation in size of cells of liver and kidney. Testicular changes include formation of giant cells and failure of spermiogenesis. Chronic treatment with doses at long intervals resulted in survival of 6 months to 1 yr. S. S.

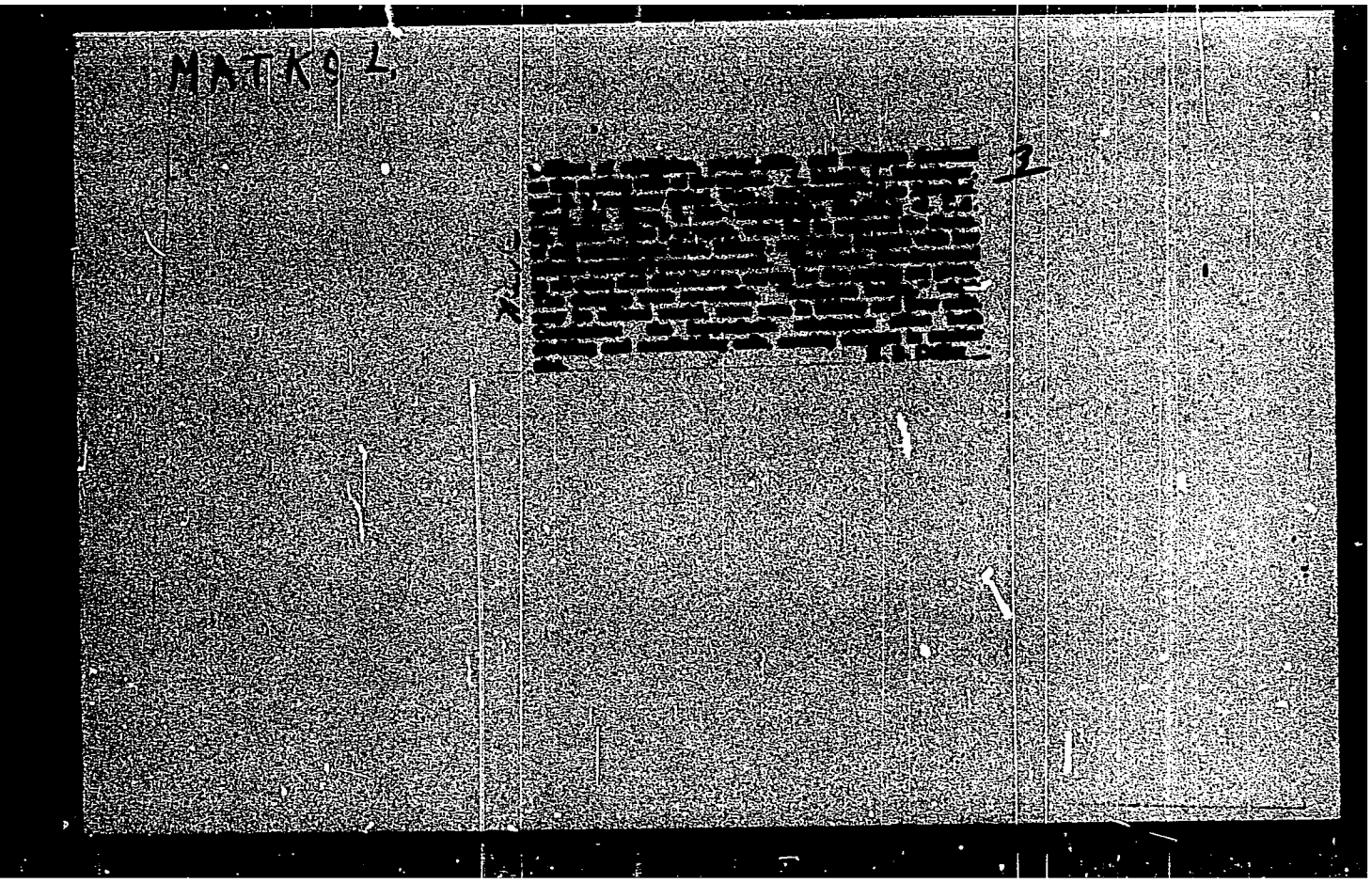
MATKO, L.

EXCERPTA MEDICA Sec.12 Vol.10/7 Ophthalmology July56

1054. MATKÓ L. Sect. of Pathol., Ladislas Hosp., Budapest. *Paraspecific lesions of lymph nodes in patients with phlyctaena
ACTA MORPH. ACAD. SCIENT. HUNG. (Budapest) 1955, 6/2 (167-175)
Tables 1 Illus. 2

The author examined the lymph nodes of 32 patients suffering from phlyctenular conjunctivitis and of 8 patients with other tuberculous eye diseases. Specific tuberculous lesions were found only in about one third of the excised lymph nodes. Paraspecific lesions were observed in about two thirds of the cases: endothelial hyperplasia, fibrinoid necrosis of the vessel walls, eosinophil and plasma cell infiltration, lymph pools and aspecific necrosis were found. These lesions are therefore believed to be characteristic not of phlyctens, but of a general injury of the organism caused by the tuberculous infection of the patients.

Orbán - Budapest (XII, 5, 15)



MOKHNACH, V.O.; BORISOV, L.B.; LITVINOV, M.A.; MAT'KO, N.A.

Antimicrobial properties of high-polymer iodine-containing compounds. Trudy LSGMI 66:162-170 '62. (MIRA 17:4)

1. Kafedra mikrobiologii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - prof. M.N.Fisher).